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ABSTRACT

This supplement to the final report, "Identifying, Validating, and Multi-Media Packaging of Effective Reading Programs," was prepared for Right to Read for use in developing an effective plan for interesting potential users in examining and possibly adopting the validated, packaged programs. The six chapters in the document address key steps in the diffusion process: setting objectives for the diffusion effort, selecting sites where the packaged programs will succeed, getting information about these programs to potential users, finding out what sites need to implement the programs, supplying what the sites need when they need it, and evaluating the effectiveness of the diffusion effort. Each chapter summarizes field experience and literature on a specific step in the diffusion process. This information comes from interviews and researchers who have introduced or studied educational change. Based on these experiences, implications for use of the Right to Read packages are listed at the end of each chapter to provide specifications for developing a sound diffusion strategy--whether for a field test of the packaged programs or for a limited dissemination effort. (Author/WR)

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DIFFUSION PLANNING FOR THE RIGHT TO READ PACKAGED PROGRAMS:

A SUPPLEMENT TO THE FINAL REPORT

Project No. 41200

Contract No. OEC-0-73-7054

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in the Behavioral Sciences
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Special thanks are also due to RMC Research Corporation and to Stanford Research Institute who have allowed us to describe some of their experiences in the current field test of the Project Information Packages (PIPs). Their candid observations and initial impressions from that experience are also reflected in the specifications we have suggested for Right to Read.

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P.L.C.
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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	iii
LIST OF TABLES	v
INTRODUCTION	vii
Purpose of the Document	vii
Chapter I - SETTING OBJECTIVES	1
Implications for Right to Read	3
Chapter II - SELECTING SITES	5
Selection Methods	5
Selection Criteria	8
Past innovativeness	8
Administrative support	9
Availability of a strong project director at the new site	9
Implications for Right to Read	10
Chapter III - GETTING INFORMATION TO POTENTIAL USERS	11
The Change Agent and the Innovation	11
The OPD Dissemination Strategy	16
Implications for Right to Read	20
Chapter IV - FINDING OUT WHAT SITES NEED	21
Factors to Include in Assessing Needs	21
Methods of Assessing Needs	24
Implications for Right to Read	26
Chapter V - SUPPLYING WHAT USERS NEED	27
Some Existing Delivery Systems	27
New Jersey's Title III dissemination network	27
Hawaii English Program (HEP)	29
Research for Better Schools (RBS) field consultants	30
Project PLAN's delivery system	31
Right to Read's Packaged Programs: Supplying Materials, Training, and Implementation Support to New Sites	32
Implications for Right to Read	36

Page

Chapter VI - EVALUATING THE EFFECTIVENESS OF THE DIFFUSION FORMAT . 39

Examples from the Field 39

Evaluating a Right to Read Diffusion Effort 39

Measuring replication of program procedures 40
Measuring student outcomes 41
Measuring cost effectiveness 41

REFERENCES 43

LIST OF TABLES

Table		Page
1	Summary of Nine Case Studies from the Far West Casebook	14
2	Procedural Steps of the Change Agent	17

INTRODUCTION

Purpose of the Document

This document has been prepared for Right to Read to use in developing an effective plan for interesting potential users in examining and possibly adopting the validated programs packaged under Contract OEC-0-73-7054.

In the last chapter of the final report on that project, a general outline of a diffusion plan was presented. The present document expands on that general discussion in two important ways:

- Each chapter summarizes field experience and literature on a specific step in the diffusion process. This information has been supplied by experienced implementers and researchers who have introduced or studied educational change.
- Based on these experiences, implications for Right to Read are listed at the end of each chapter. These implications, taken together, provide Right to Read with specifications for developing a sound diffusion strategy--whether for a field test of the packaged programs or for a limited dissemination effort.

The program packages developed by AIR for Right to Read will not improve local reading instruction unless new sites are found and are helped to select, adapt, implement, and evaluate the programs appropriately. Therefore, we recommend that a comprehensive plan be developed so that the exemplary reading programs packaged for Right to Read can be successfully used in new locations. Such a plan--one that brings together potential users, packaged programs, and change agents who can supply whatever implementation support new sites need when they need it--will help these outstanding reading programs have far-reaching impact.

Chapter I

SETTING OBJECTIVES

The kind of field test plan to be developed depends on Right to Read's objectives in publicizing the packages, making them available, and encouraging their implementation. If exact-copy replications of the exemplary programs are sought, this objective may require diffusion and implementation strategies that are different from strategies that would be needed if potential users were free to alter or eliminate major program features.

Right to Read is already aware that some of the package programs provide a system for making adaptations without contaminating essential components or risking successful outcomes. For example, "planned variation" is built into new installations of the Hawaii English Program (HEP). Also, HEP staff at present do not permit new sites to implement the program without their supervision. Staff for the other package programs may also wish to assist new sites in installing faithful replications, and may have their own recommendations regarding the leeway consumers have to alter their validated approaches. Thus, Right to Read should work out objectives and strategies for diffusion and implementation with staff of the packaged programs. A cooperative approach will also ensure that the objectives agreed upon are consistent with services these producer sites can offer to consumer sites.

Most implementations will not be true replications; they will be adaptations (SSEC [Sec. 4.0], 1973; Hull, Kester, & Martin, 1973). Orlosky and Smith (1971), in reviewing major educational innovations from 1895-1970, concluded that when changes have required removal of an existing approach, or when they have demanded all-or-nothing adoption, their chances of success are less. DeVore (1971) referred to Gillie, who indicated that an innovation should be modified from its original form so it blends with cultural values and past experiences of those who are to make the adoption. Several authors have cited ease of adapting to local conditions as one of the primary factors likely to influence a school district's decision to implement a new program (Gross & Kaplan, 1974; Hull, Kester, & Martin, 1973; Foshay, 1973).

In the field, some implementers have sought to replicate the essential features of innovative programs at new sites, particularly when the program has been proved a success at the original site. To find out how these efforts have fared, interviews were held with the following individuals or

groups: the New Jersey State Department of Education, Office of Program Development; project staff at RMC Research Corporation, which is participating as subcontractor with Stanford Research Institute in a field test of the Project Information Packages (PIPs); the project director of Project ALOHA, the mainland replication of the Hawaii English Program; and Dr. William Shanner, who was involved in developing and disseminating Project PLAN.

Based on the collective experience of these implementers in trying to meet the objective of adoption, not free adaptation, the following conclusions are drawn:

- Simply providing good descriptive materials and curriculum materials is not enough to guarantee a successful replication.
- New sites will need specific kinds and amounts of technical assistance in order to successfully implement the innovative program or practice.
- New sites must understand what they are getting into and must formally commit themselves to replicate essential features of the program.

The individual experiences of these implementers led them to different means for insuring their aim of successful replications. For example, the New Jersey OPD staff developed a Producer-Consumer Agreement. This document explains in detail the services offered by the producer district (demonstration site for the exemplary program), the skills that will be taught to consumer district staff, and commitments the consumer must make to be accepted for training at the producer's expense (Title III funds). Commitments include an agreement to replicate essential program features (identified by the producer district), to provide a plan for implementing them, to appoint a regular staff member as project director, and to cooperate with those who will validate the replication. The Producer-Consumer Agreement is signed by the following individuals, at least: for the producer district, the superintendent and the liaison person from the demonstration site; for the consumer district, the superintendent, the project director (liaison) for the new site, and the principal(s). The RMC staff believe that a suitable legal contract signed by both parties (agency funding the implementation and the implementation site) could help prevent failure to replicate. They feel that two basic requirements of such a contract would be agreement to faithfully implement specified program features and agreement to submit to outside evaluation.

IMPLICATIONS FOR RIGHT TO READ

1. The disseminator, in concert with staff of the packaged programs, should specify how it intends these programs to be implemented by users at new sites; i.e., as true replications, or adaptations? These terms or others which indicate acceptable and unacceptable implementations should be defined.
2. These objectives should be publicized as part of the diffusion strategy.
3. A clear statement of these objectives should be included in some kind of formal agreement with implementation sites.
4. Right to Read should consider what sort of delivery system will help to ensure that its objectives are met; the elements of this system should be incorporated into the field test plan.

Chapter II

SELECTING SITES

Right to Read should consider how it can help sites make good selections from among the packaged programs. If the packages are to have the desired impact on local reading instruction, new sites must be able to judge whether a particular program meets local needs. A new site must also be able to select a program that it is capable of implementing and sustaining, or it will not be able to reap the benefits of improved reading achievement that were evidenced at the original program site.

Whether Right to Read decides to let new sites make their own selections or whether Right to Read wants to exercise some amount of control over where their packaged programs are implemented, answers to the following questions are needed:

- What is a good approach to matching sites and programs? Should the choice of programs or sites be structured or systematized? If so, how?
- Should Right to Read try to select programs for sites? How important are user characteristics in predicting where a particular program is likely to succeed?
- Is self-selection by these sites to be recommended? Or is there some optimum combination of client-centered selection and agency selection? What does this mean for Right to Read?

The answers to these questions depend on how Right to Read intends to field test the packages, and on whether faithful replications are required. The information in this section indicates how others have dealt with similar questions.

Selection Methods

Some implementers have tried to select sites where their innovations and products ought to succeed. Other implementers have either stopped short of this step or have bypassed it. They allow anyone to buy or acquire their product, and to use it or not. The former approach may include research and development aspects; the latter approach is closer to commercial marketing practice. The experience of both kinds of implementers is discussed in this section.

In the current field test of the Project Information Packages (PIPs) which were produced by RMC Research Corporation (RMC), the federal funding agency in cooperation with the Office of Planning, Budgeting, and Evaluation

selected the tryout sites. In response to a short ad in the Federal Register announcing the availability of funds for this purpose, over 30 interested sites replied and eventually submitted proposals that included whatever needs assessment data they had. These data were to be used to select the tryout sites. RMC was asked for advice on what factors to consider in selecting them, specifically, program characteristics which would help match PIPs to suitable applicants. RMC identified characteristics of each of the exemplary PIP programs and their sites that might be used to make an appropriate match between applicants and programs; RMC did not see the applicants' needs assessment data. The agency may or may not have been able to use the RMC suggestions--the needs assessment data were reportedly inadequate to use for matching in some cases, and there were so few PIPs that the age or grade level of participants determined the match in many cases. Nevertheless, 19 tryout sites were selected; RMC was not involved in the decisions.

RMC indicates that some of the sites tend to modify the programs. Although it would be inappropriate to draw conclusions when the PIP field test is still underway, some hypotheses can be raised for Right to Read to consider in determining its own strategy:

- Failure to involve potential tryout sites in matching programs to local needs may be associated with the tendency for sites to want to modify the program or approach.
- It is not workwhile for an outside agency to try to match programs to sites when available needs assessment data is inadequate for this purpose, or when there are too few applicants to make matching possible.
- It may be impossible for an outside agency to promote faithful replications unless local sites recognize and understand that the exemplary program is a coherent approach--that in order to be as successful as the original site, the user may have to implement all of its essential features.

To improve selection, RMC developed a strategy that involves the user in choosing the PIP and provides the funding agency with better information on which to award tryout grants. RMC's strategy is based on an "analysis and selection kit." (In the current field test, selection took place before completion of the kit.) The purpose of materials in the kit is to help potential users make their own selection among the PIP programs realistically, in a systematic way. A major feature of the kit is that the materials are mailed to potential users in three waves, and then only to the respondents who continue to indicate interest in the PIPs. A second feature is that the materials at each stage are more informative and move the potential user closer to making

a commitment to implement a particular PIP. The three levels of information provided by the analysis and selection kit are as follows.

1. FLYER. The purpose of the flyer is to create interest and awareness among a large number of potential users. The flyer summarizes what the choices are among the PIPs. It is intended for a Fall mailing.

2. PACKET. The packet is mailed to those responding to the flyer. The purpose of the packet is to provide information in a format that makes it easy for a potential user to narrow his choice down to one or two PIPs. Thus, more detailed information about these exemplary programs is provided, especially regarding the constraints on a new site that would be associated with implementing a given PIP.

3. FILMSTRIP, PLUS MORE DETAIL ON INSTRUCTION AND MANAGEMENT FEATURES. Respondents to the packet mailing receive this information for the one or two PIPs they have chosen. The emphasis is on cost factors and resource allocation, so potential users can develop budgets and arrange to provide facilities, materials, and so on. The objective of providing the filmstrip and greater detail at this point is to get the potential user to obtain a commitment locally and to respond with a formal, written proposal for federal funds. The proposal must indicate that the site understands and has arranged to supply what is needed. The proposal is used by the federal funding agency to screen applicants and to make final negotiations for field testing the PIPs.

Although the PIPs and the Right to Read packages were designed according to quite different specifications, the strategy developed by RMC for user selection should be reviewed for possible application to field testing the Right to Read products. There appear to be several advantages to using this kind of approach:

- It is client-centered, consistent with recommendations in the literature cited in the previous and present sections.
- It provides the user with a system for judging the relevance of the packaged programs for his local objectives and needs.
- It focuses the user's attention on essential features and constraints of each packaged program that will have to be provided for by the new site.
- Given this guidance, the system places the responsibility on the user for making his own choice and for getting local commitment to implement the program. The user, acting as a change agent, is probably a better advocate than someone external to his system.

- By requiring users to submit proposals for implementation funds, the funding agency has a basis on which to select sites that indicate a sufficiently high level of need, commitment, and awareness.
- Depending upon the requirements of the request for proposal, information supplied by the proposal writer may also help the funding agency judge whether or not a suitably qualified and empowered project director has been identified, and what sort of technical assistance may be required.

Gross and Kaplan (1974) cite three factors that are likely to influence a district's decision to tryout a new program: (1) ease of adapting to local conditions, (2) relevance of program to achieving local objectives, and (3) availability of external funds. The use of a request for proposals from sites interested in replicating a program is also recommended by Adelman (1973). Helping districts decide if an innovation of proven success is feasible for them is the task of the disseminator (Ohme, 1972). In carrying out this task, the disseminator must remember that his success as a change agent will be positively related to client orientation, rather than change agency orientation (Rogers & Shoemaker, 1971). Right to Read may be limited in this respect unless it uses change agents who are not identified as their representatives. Regardless, the message is clear from the literature and from field interviews: Change must suit the client; change efforts must always be focused on this.

Selection Criteria

Adopting a client-centered approach does not rule out selection of field test sites by Right to Read, even if the choice of innovation and the decision to try it is left up to the user. Particularly when more districts respond to an RFP than are needed for a field test, or when there are more applicants than can be serviced by the support system, there will be a need to choose from the applicant pool. The choice should be based on criteria that indicate a high likelihood of successful implementation. These are some criteria that have been applied, quite informally in some instances, to select sites that are willing to innovate and are capable of successfully implementing the new practice or approach:

Past innovativeness. Districts that have a history of receptiveness to trying new ideas are likely to be confident, practiced implementers (SSEC [Sec. 4.0], 1973; Rogers et al., 1973; Clark, 1974). The same point was made by a project director at one of the Title III producer sites in New Jersey during a recent field interview. However, there are strategies for enhancing

a school system's capacity to innovate, even without prior experience, and for dealing with low innovators within a school system (Leithwood et al., 1974; Hull et al., 1973).

Administrative support. More than money, administrative support means that adequate staff time, facilities, materials, and equipment are allocated for the implementation and that the district office and school principals agree to provide ongoing support to the newly implemented program by phasing it in as planned, by providing the planning time teachers need, and by monitoring the implementation to be sure the new program is being carried out. These comments are based on field interviews and are supported by the literature (Larsen, 1973; Rogers et al., 1973; SSEC [Sec. 5.0], 1973; Schmieder, 1974) and in case studies reported by Cutter (1974) documenting the dissemination policies, procedures, and programs of nine state education agencies.

Availability of a strong project director at the new site. AIR field interviews in New Jersey and California also indicated the importance of a well-qualified project director to successful replication. RMC staff indicated that these individuals at the original PIP sites are characteristically strong leaders, experienced, tenured in the district, and operate with a great deal of autonomy in the district's chain of command. It appears to be important for project directors at new sites to be experienced project administrators, to have easy access to key individuals in the organization structure, and to carry weight with the staff they supervise.

All three of these attributes of a site--past innovativeness, administrative support, and a strong project director--are important because they influence how change becomes stabilized. However, the lack of one or more of these attributes need not eliminate a site if there is reason to believe that a potential disadvantage can be offset by adequate training and an adequate support system.

IMPLICATIONS FOR RIGHT TO READ

1. If Right to Read distributes the packages without assistance for user analysis and selection, successful replication of these validated exemplary programs cannot be guaranteed.
2. A way should be found to help potential users select a particular packaged program. It is recommended that the choice (given this structure) be left to the user.
3. In developing an analysis and selection strategy for the user, the disseminator should coordinate with staff of the packaged programs to tailor this strategy to the features and constraints of each of these programs. (An analysis and selection strategy was described in this section. The guiderule developed by AIR for Right to Read could be included in the selection strategy.)
4. If federal funds are made available to implement the packaged programs at new sites, Right to Read should coordinate with the funding agencies to develop a procedure for screening applicants. (The proposal strategy discussed in this section is one alternative.)
5. The strategy for screening sites, whatever form it takes, must provide a basis for selecting those where implementations are likely to succeed. (Attributes of a site that predict successful implementations were discussed in this section. Screening should identify the applicants which have these attributes already. Or, if need is the overriding attribute, then screening should identify the amount and kind of training and technical support which will be needed for a successful implementation.

Chapter III

GETTING INFORMATION TO POTENTIAL USERS

How will Right to Read get news of the packages to sites that need and want to improve their present practices in reading instruction? What kinds of audiences should be told, and through what channels? What can Right to Read do to ensure that these contacts will lead to optimal usefulness and value of their packages?

These questions have been faced by others who have tried to attract and convert potential users to their innovations. Their experiences are summarized in this section in order to (1) define further the questions about Right to Read's role in disseminating information about their packages, (2) explore methods that might be appropriate for disseminating the packages per se, and (3) consider the impact the Right to Read packages may have on local reading practice if they are distributed according to a comprehensive diffusion plan.

For Right to Read's present purposes, the literature summarized below focuses on case studies and writings by those with experience in diffusing educational innovations. Especially useful for Right to Read's planning in this area are the Far West Lab diffusion casebook (Turnbull et al., 1974), the description of the Research for Better Schools field consultant program (Clark, 1974), and AIR's study of the impact of 20 innovative educational products (Crawford et al., 1972). Further practical information came from agencies presently working to disseminate educational innovations--the Office of Program Development (OPD) in the New Jersey State Department of Education, and Stanford Research Institute (SRI) and the RMC Research Corporation in California.

The Change Agent and the Innovation

The diffuser (change agent) can facilitate innovation by taking steps to assure that the target group will perceive the new idea as having attributes tailored to its needs. Rogers and Shoemaker (1971) have grouped these perceived attributes into five types: relative advantage, compatability, observability, trialability, and complexity. Many case studies and current diffusion efforts illustrate the disseminator's function in helping potential users assess these attributes of an innovation. The change agent can gear his presentation to help the user determine for himself that the innovation

is better than the practice he is presently using (Clark, 1974). The change agent uses incentives to prompt his contacts to spread the word to others. When members of the target group themselves become change agents, influencing others of their number to try the innovation, the rate of adoption can increase dramatically (Turnbull et al., 1974; Burkman in Rogers et al., 1973). This phenomenon is partly explained by the identity of the change agent--when he is a member of the group he is trying to influence, when he is like them, he can be a convincing spokesman. His commitment gives face validity to the innovation's relative advantage and its compatibility with the existing values, experiences, and needs of his peers. Related to these perceived attributes and the role of the change agent is evidence that direct attempts to promote concurrent adoption by all members of a faculty may not be as effective as concentrating initially on those who are receptive (Turnbull et al., 1974). Leithwood et al. (1974) suggest additional strategies to provide incentives for the low innovator as well as the high innovator.

The implication for use of the Right to Read packages is this: If Right to Read restricts its role solely to making the packages available, the audience for the packages is likely to be restricted to those who are interested in seeking available information about innovative programs, i.e., "high innovators." If Right to Read distributes the packages through networks of change agents with knowledge of local needs and a planned follow-up sequence, the likelihood of reaching a wider audience will increase. Thus, depending on the strategy undertaken for disseminating the Right to Read packages, their function could range from serving as a stimulus to convert high innovators into adopters and internal change agents, to serving as just one component in an external change agent's procedure for facilitating planned change in a school or district. In the first case, the packages would correspond to the "one-way communications tactics" described by McCutcheon and Sanders (1973) as most appropriate for spreading awareness among a non-resisting audience. In the second case, the Right to Read packages would be an early step in promoting awareness, but would be used in conjunction with "two-way communication tactics," which are discussed below under "personal contact."

Attempts to make an innovation visible to potential users are an almost universal characteristic of educational product diffusion (Crawford et al., 1972). However, observability, defined by Rogers and Shoemaker as "ability to observe that the innovation functions as advertised," is cited by a

knowledgeable school administrator (Ohme, 1972) as a key aspect most often found wanting in vaunted "exportable models." The careful evaluation and the detailed multi-media presentation of program information in the Right to Read packages probably provide as much "observability" as anything could, short of an actual site visit. Providing for visits to the original exemplary program sites involves taking the next step beyond the package presentation. It is an important step, because on site visits, users can see the program in action and examine its materials. If users can then try out the exemplary approach, its credibility can be enhanced still further. In the case studies published by the Far West Lab, Turnbull and others (1974) found that trialability was characteristic of the most successful dissemination efforts.

Providing users with a chance to try the innovation also involves taking the next step beyond the package presentation. These two areas--on-site observation and trial runs--are both areas where Right to Read efforts to facilitate diffusion of the validated programs might logically be focused. For example, Right to Read could explore possible avenues for linking potential users to original program sites, and for providing them with opportunities for "hands-on" trial.

The last attribute, program complexity, is inversely related to likelihood of successful implementation (SSEC [Sec. 3.0], 1973). However, like all the other aspects of the innovative program or practice, it is the perceived attribute which is of concern, and this is always (1) relative, and (2) possible to offset by adequate training. Thus, it affects such aspects of diffusion planning as selection of sites and amount of training to be provided. It would certainly vary greatly among the programs which have been packaged.

Additional and related implications for Right to Read's diffusion planning can be drawn from the Far West Lab's diffusion casebook (Turnbull et al., 1974), which documents the dissemination strategies of 10 educational innovations. The nine most relevant case studies are summarized in Table 1. The first column in the chart, Informing Users, summarizes the several ways in which information about these innovations was communicated to potential users. Based on these case studies, the following are some of the factors that emerged as critical during the diffusion phase:

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Table I. SUMMARY OF NINE CASE STUDIES FROM THE FAR WEST CASEBOOK

INFORMING USERS	SELECTING SITES	TAILORING TO SITE	SUPPLYING SERVICES, MATERIALS, TRAINING	EVALUATING DIFFUSION
Multiunit School/IGE - Brochure mailed to 30,000 educators. 500 respondents attended information conferences for more detail on project.	Subcontracts with 9 state depts. of education agreeing to establish cooperative network of schools and teacher training institutions in state (i.e., get ting the state to act as linking agency).	Not described.	Before training at building level, had workshops for administrators and central office staff to train for leadership of project. Then principals and unit leaders trained; they in turn trained whole school staff.	A team from R & D Center visited 20% sample of multiunit schools to determine success of implementation. Center also kept records of costs and effects of diffusion.
Research Utilizing Problem Solving (RUPS) - Printed materials distributed via a large number of specialized mailing lists. Also advertised thru CEDaR D+R Reports, and an educational journal. The journal was not cost effective and was dropped. Preschool contacts--thru attending conventions. Also, network of 18 regional training representatives.	Apparently anybody who wants the program can purchase it.	Not described.	The RUPS trainers provide initial training. After that, those who were trained train others. RUPS is more an approach for teachers than an actual program to be installed in the classroom. Little attention given to sustaining program after novelty wears off.	Compared money spent and number of RUPS packages sold. (Money spent was estimated at 30% for personal contact, 70% for printed materials.)
Parent/Child Toy-Lending Library - Promoted awareness thru mass media and thru state depts. of education. Orientation sessions were conducted at the state depts., and then brochures, film, tape, and a set of materials were left for use by interested persons. Also, 14 demonstration sites set up in different agencies - church, clinic, school, etc.	Any agency may purchase the materials. There must be an available meeting place and a Toy Librarian, generally a member of the community.	In some cases, parents wanted to buy the toys, but not the whole training package, for which a group of interested persons is required. Toy purchase is directly from the manufacturer of the toys.	Laboratory staff trained area consultants to act as trainers of others. The developers can refer interested agencies to one of these consultants and the materials can be purchased through the lab and toy manufacturer.	The program philosophy is that variety in implementation is good, so they have not checked on quality of replication. Some info gathered for final report on an NCEC grant which aided dissemination, but not conclusive. Far West's info shows little success in actually reaching the potential market, however.
Simulation Games - 2 direct mailings, journal ads, demonstrations at conventions, articles in educational magazines. Also 40 commissioned field representatives were to sell the games, produced and marketed by commercial manufacturers.	Anybody could buy the games, primarily teachers in schools.	Not applicable.	The developers felt that workshops were important in disseminating the games, but the experience of the sales reps. does not support this. Some supplied workshops, some not - it didn't seem to matter. No uniform approach was used.	No strategy for evaluating. Far West's assessment is that the games have not been very successful, partly because they are too inexpensive to warrant much effort in dissemination.
Minicourses - Again with a grant from NCEC, the Lab mailed announcements to the 5,000 largest school districts. These included a letter from the Asst. Commissioner of NCEC, a letter from the Lab director, and an article from Newsday about the minicourses, plus a return mail card. 20% responded wanting to see a demonstration site.	Areas with the highest indicated interest were selected for demonstration sites, plus four other areas were chosen to have "floating demonstrations." The floating demos were felt to be inadequate because they were too short-lived. By the time people found out about them, they were scheduled to move on.	Not described, probably not applicable. The product is for teacher-training, is relatively expensive, and is not amenable to adaptations.	The developers felt that these were "complete operational packages" and that users needed no assistance. However, it turned out that some of the purchasers did not keep using them; whereas among those who received outside assistance in implementation, more Minicources were purchased and used.	Evaluated money spent and number of products sold. In the course of the present research, interviewed persons involved in the diffusion.

Man: A Course of Study - Early efforts were primarily to acquaint teachers with the program and its use, in the hope that they would also function as disseminators. This was not very successful, and a second approach, figuring that teachers are seldom key decision-makers in adopting a new curriculum, aimed efforts at teacher trainers, curriculum specialists, district staff, etc. Implementation increased significantly. Use of "The Institutional Faculty" - image of prestige, professionalism.	Field test sites were all in northeast, possibly a flaw since other areas of the country might have provided more insight into potential problems in diffusing this controversial curriculum.	Some adjustments in cost (by deleting the films from materials) or mode of payment were made in response to evaluation of user needs. Also special staff development activities to help teachers design curricula to precede and follow MAN, again as a result of evaluation of program implementation.	Developers required a signed commitment to 30 hours of training from all prospective buyers. Varied arrangements are made for training, depending on district size and resources, presence of some trained teachers already, etc. Worked closely with sites. Also worked on establishing training in teacher education institutions, through agreements with colleges, etc.	Evaluation of diffusion, implementation, and adaptation has been included since the beginning (See also Tailoring to Site). The distributor and developer work closely with sites whenever necessary. They planned a special evaluation when program was to be implemented in Germany.
Inquiry Development Program in Physical Science - Usual SRA diffusion channels-175 salesmen, awareness advertising, convention exhibits, and demonstrations of the program when sales were low, they did more of the same. It later became apparent that for a program as different as IDP, requiring a real change in teaching behavior and philosophy, new diffusion methods were required. But SRA did not feel they had the money to develop and carry out the effort. The program was dropped by SRA after 6 years.	There was no field testing of the materials at all. The approach had previously been validated by developer Suchman while at the University of Illinois.	None described. Some special additions were produced for all sites in an attempt to boost sales, e.g., a newsletter on the program. Potential users found that this gave more up-to-date and relevant info than the program materials themselves. Also produced a Teacher Handbook Kit to give in-depth info to interested educators and a Starter Set or sample which could be tried out in the classroom.	One of the major problems was that once the program was purchased, SRA provided no implementation support for users. SRA staff and the developer now agree that teacher training in the inquiry approach was crucial, but by the time they realized this, it was too late.	None except for the usual cost-effectiveness - which made them decide it was too costly.
Drug Decision Program - Advertising thru the mail, presentations at conventions, etc., produced interest, but it took face-to-face contact to produce sales.	Anyone could buy the program. It was field tested in California and Rhode Island, but field testing was not used as a tool to market the materials and the test districts did not, by and large, buy it.	Very little or nothing was done here, and this was cited as one of the problems. The materials were so carefully and tightly sequenced as to prevent adaptations.	Free training was offered to any district that bought $1,000 of materials. For others, training costs run about $200. The publisher has contracted with teachers and administrators skilled in using the program to do training. Training is focused on use of materials provided, rather than on expanding or adapting them in any way.	None mentioned.
Technology for Children - Some early strategies that were abandoned: (1) Providing training alone, without materials (Teachers had trouble implementing). (2) Providing only an elaborate set of materials (The package proved unpopular). Parent approach combines financial incentives for adopters, teacher training, and involvement of administrators. An important change in techniques came when they decided to stop trying to sell all teachers on the program and concentrate on those most likely to implement. This produced a dramatic increase.	Any school could adopt the program. Later, to ensure administrative support, they required that the district match the $300 incentive given to implementing teachers to pay for training and materials. This seemed to work well.	The program began a system of having four teams - three made up of teachers, administrators and one of parents/resource people. These teams, one for each administration, teacher training, curriculum (providing ideas for classroom implementation), and enrichment (resource persons who help in implementing). Thus, each site tailors for itself and also builds its involvement.	The program materials were developed by staff in cooperation with teachers and administrators throughout the state. Additional materials are supposed to be developed by users as needed. The ones provided are brief units called "Episodes," used more as a source of ideas than as set lesson plans. Users are not required to purchase them. Training was initially provided in 6-week summer institutes. Later, training was taken over by the training team (See Tailoring to Site) of already-trained people.	Use of sales figures, monitoring reactions from parents, teachers, administrators.

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- Simple awareness-oriented advertising is generally not enough to get potential users to buy a product.
- Dissemination efforts involving trial experiences are relatively more effective.
- Demonstration sites are not always a successful technique; they depend on the local people operating them.
- The concept of target population (different users have different wants and needs) is important.
- Distance--either physical or psychological--between developers and disseminators has frequently hampered the diffusion of a product.
- Incentives to change agents are important.

To summarize, the implication for diffusers is that perceived attributes of an innovation should be tailored as much as possible to suit the potential user, and that innovations and potential users should be carefully and appropriately matched. Further, diffusers should encourage communication among the target population in order to accelerate the rate of adoption (diffusion effect).

The strategic importance of personal contact has been emphasized in diffusion studies at AIR (Larsen et al., 1974; Gross & Kaplan, 1974; Crawford et al., 1972) and elsewhere (Turnbull et al., 1974; Havelock, 1973; McCutcheon & Sanders, 1973; Sarbaugh et al., 1973; Clark, 1974). The conclusion of these authors is basically that presentation of information promotes awareness, but this does not in itself lead to trial. Personal contact and support make implementation more likely (SSEC [Sec. 5.0], 1973). Sarbaugh et al. (1973) found that simple consulting sessions--having an expert user present to talk to teachers and administrators after they had viewed display modules describing new educational programs--increased their subsequent adoption of the new techniques. The type of personal contact, of "two-way tactics," used to help educators progress from awareness of an innovation to the point of making a decision to change their own system can be as brief and simple as the "consulting sessions" or as extended and comprehensive as site visits, decision-making conferences, and training workshops. Such tactics, as McCutcheon and Sanders (1973) point out, are more costly and complicated, but more effective, especially when dealing with high-level decision-makers or resistant consumers. The same authors suggest that selection of two-way tactics can be planned to capitalize on the existing communication habits of the target group. For example, if members of the target group usually communicate with each other through an internal

information network, regularly held conferences, or professional organizations, then diffusers can plan to communicate with them through these existing channels.

The characteristics, training, and activities of change agents in diffusing and implementing innovations is well documented in the literature. Table 2 shows the procedural steps of the change agent as outlined by Havelock (1973), Rogers and Shoemaker (1971), and Lippit, Watson, and Westley (1958). From these sources we have drawn a composite sequence which is compatible with all our evidence from case studies. The following eight steps represent our summary of the process by which a change agent introduces innovations:

1. Develops a need for change. The change agent makes the client aware of problems or needs and points out new alternatives.
2. Establishes a change relationship. The change agent gets clients to accept and trust him.
3. Diagnoses the problem. The change agent, remembering the point of view of the client, analyzes the problem to determine why existing alternatives do not meet the client's needs.
4. Examines resource options. The change agent provides opportunities for the client to review new alternatives and evaluate their suitability.
5. Creates intent to change in the client. The change agent secures a commitment to change through a client-centered approach; he does not advocate change for change's sake.
6. Translates intent into action. The change agent works to promote compliance with the program he advocates.
7. Stabilizes change and prevents discontinuances. The change agent might accomplish this by identifying and supplying needed services, materials, and training.
8. Achieves a terminal relationship. The change agent develops self-renewing behavior in clients.

The OPD Dissemination Strategy

The above sequence of change agent roles suggests a strategy for introducing information about educational innovations, and subsequent strategies for following through with successful, stable implementations. These strategies have actually been used by staff in the Office of Program Development (OPD) of the New Jersey State Department of Education and project staff at

Table 2. PROCEDURAL STEPS OF THE CHANGE AGENT

HAVELOCK	ROGERS and SHOEMAKER	LIPPIT, WATSON, and WESTLEY
1. Establish relationship between user and change agent.	1. Promote awareness of need for change. 2. Establish change relationship.	1. Help client system discover need. 2. Establish and define change relationship.
2. Diagnose problem.	3. Diagnose problem.	3. Identify and clarify problem.
3. Acquiring relevant resources.		4. Examine alternative change options and establish change goals.
4. Choose a solution.	4. Promote user intent to change. 5. Translate intent into action.	5. Make change efforts in real situation.
5. Gain acceptance.	6. Stabilize change.	6. Generalize and stabilize change.
6. Establish self-renewal behavior in user.	7. Establish terminal relationship in which user behavior is self-renewing.	7. End relationship or define continuing relationship.

"producer sites" where validated, exemplary educational programs are operating. Both the OPD and personnel at producer sites fill change agent roles. These roles are carefully defined and categorized according to three levels of dissemination activities: awareness, involvement, and commitment (Soper, 1974). At each of the three levels, activities include direct contact with potential users; however, it is the "producers" of the innovative program--not OPD staff--who have closest contact with the user.

The change agent strategies which characterize OPD's dissemination effort are relevant to Right to Read's diffusion planning. Change agent roles are summarized below for each of three levels of dissemination. (The numbers refer to the sequence of the eight change agent roles summarized above; brackets mean that roles are tacit rather than explicit.)

- Awareness level. (1, [2]) The purpose of awareness activities is to inform both the general public and educators about the innovative programs, and about the services and materials offered by the producer sites. Diffusion strategies at this level include mailing information, publishing information, conducting orientation workshops in local school districts, and sending information to national information systems. Activities are targeted for local, state, and national audiences. OPD's roles are behind the scenes, e.g., they make large scale mailings, prepare and mail project descriptions, organize statewide orientation workshops, and contact superintendents of districts in which producer sites are located to provide recognition, support, and encouragement for the dissemination work. In contrast, staff at the producer sites play highly visible change agent roles. They make the workshop presentations, distribute their project materials upon requests from potential users, respond to their inquiries about the program, and attempt to interest them in replicating their programs.
- Involvement level. ([2, 3], 4, 5, 6) As a result of the awareness level activities, some potential users express their interest in visiting the program and in examining its materials. For them, involvement level activities show and/or demonstrate the program in action, in hopes that potential users will evaluate the program's usefulness favorably and decide that it will meet the needs of their situation. It is the responsibility of the producer district to accommodate visitors. Visitors watch the program in action, and ask questions. Program staff answer their questions and discuss the program with them. Visitors examine program materials and read the Producer-Consumer Agreement (described in the preceding section) to see what commitments they would be asked to make in order to replicate the program. As a result of these involvement level activities, some number of potential users purchase program materials prepared by the producer site. Later, having secured the agreement of their local districts to implement the program (via signed Producer-Consumer Agreement), these users--now called consumers--register for training by the producer site.
- Commitment level. (7, 8) Diffusion activities at the commitment level consist of training consumer staff to implement the program's

procecures and materials, and providing follow-up consultation during the first year of implementation. It is the responsibility of the producer site to impart to consumers all of the skills and knowledge required to replicate successfully the essential components of the validated program, and achievement of results comparable to those of the producer district.

The above overview of the three-stage dissemination strategies followed by New Jersey's Title III Office of Program Development illustrates ne application of the sequence of eight change agent roles summarized on the basis of our selective literature review.

IMPLICATIONS FOR RIGHT TO READ

1. The disseminator should identify the target groups to be informed about the availability of the multi-media packages for validated exemplary programs approved by the OE Dissemination Review Panel. (The DRP seal of approval will increase acceptance of Right to Read's packaged programs by some target groups.)

2. Information about the packaged programs should be targeted for a wide variety of target groups, for educational change occurs through the knowledge and support of many individuals and organizations.

3. The disseminator should identify one-way and two-way channels of communication that are used by these target groups, or that could be effectively used to direct news of the packages to them.

4. The disseminator should identify change agents and change agent strategies within each of these channels of communication that are likely to increase the response by potential users.

5. The disseminator should coordinate these plans with staff of the packaged programs. This is crucial in order to establish links between them and potential users of the programs as early as possible in the diffusion process.

6. The disseminator should recognize that simple awareness-oriented advertising alone will not lead to trial implementation of the packaged programs. If planned change toward these validated practices is to be the goal, then diffusion plans need to include a series of activities at several levels of involvement. These activities must be designed and sequenced to move potential users from initial interest to firm commitment to implement the exemplary program.

7. In order to make any real impact, diffusion plans must include not only mass communication of information about the packages, but also mass distribution of the packages per se.

8. To minimize the burden on Right to Read staff, possibilities should be explored for using existing federal and state level diffusion and implementation networks. (For example, Title III has established a nationwide delivery system for disseminating and implementing innovations in education, and they allocate funds to finance these efforts. Other federal agencies may offer similar services and funds. Our literature review has identified at least nine state education agencies which have communication networks and specific practices for diffusion of innovations (Cutter, 1974). State Right to Read coordinators could also be trained for roles in the diffusion process.)

9. An important criterion in selecting diffusion and implementation networks is the degree to which these delivery systems can supply personal contact and support to potential users.

Chapter IV

FINDING OUT WHAT SITES NEED

In order to ensure successful implementation of an innovative program at a new site, the change agent must consider the special needs of that particular site and make provision for helping the site acquire the needed resources. In some cases, this may also entail provisions for modifying the program in order to fit conditions of the new site. Diffusion of the Right to Read packages raises several questions related to finding out what sites need:

> What are the factors to be included in the assessment of what sites need?
>
> In relation to each factor, what specifications can be developed for the type of support required?
>
> What methods should be used to find out what sites need? How much needs to be, or can be, found out in advance of actual program implementation?
>
> What implications can be drawn regarding what producer sites need, depending on the nature of the dissemination strategy and of the program?

It is apparent, both from the literature and from the experience of persons interviewed, that the whole question of finding out what sites need is closely dependent on the particular situation--the type of program, the site itself, the extent to which the effort is one of replication or one of adaptation. Nonetheless, some generalizations can be made in regard to each of the specific questions above.

Factors to Include in Assessing Needs

Hull et al. (1973) discuss several characteristics of an innovation which are related to the ease of diffusion and the need for various types of support during the process. In addition to the five perceived attributes listed by Rogers and Shoemaker and already discussed in an earlier section, these factors include: cost, staff, space required, time required, magnitude of the innovation, and value orientation. Each of these factors varies according to how it is perceived by the user, and each might be included in a general plan or checklist for finding out what sites need. As a further step, there should be a specification of support needed in relation to each factor.

Cost is cited by several authors as one of the most important factors

influencing adoption of an innovation (SSEC [Sec. 3.0],1973; Hull & Kester, 1974; Rogers et al., 1973). However, it varies depending on the user's viewpoint, whether the new program replaces a different one for which money was already being spent or represents a totally new expenditure, whether it is viewed as a long-term or short-term expense, whether the program has a source of funds or not. Some categories for specifying support needed could include: funding, either full or part (Hull et al., 1973), consulting about other sources of funding and how to approach them (Turnbull et al., 1974; SSEC [Sec. 3.0],1973), consulting about new methods of budgeting certain items (SSEC [Sec. 3.0],1973), or developing ways to use resources more economically, e.g., rotating schedules to allow several classes of students to use one set of materials and equipment.

A different aspect of site needs in relation to cost factors is illustrated by one of the Far West Lab's case studies (Turnbull et al., 1974), in which the producers of an innovation found that requiring sites to provide some matching funds tended to insure commitment to the program. In other words, a need to come up with matching funds may be as important as a site's need to receive funding support.

The cost factor is crucial for producer sites also. Depending on the role they have in the diffusion of the program, they may have to incur additional expenses in the course of answering inquiries, mailing out information, receiving visitors, or giving training (Soper, 1974).

Staff, like cost, is a primary consideration in the view of both teachers and administrators (Hull & Kester, 1974). There must be sufficient personnel at the levels required to carry out the new program. Furthermore, the quantity of staff is not the only important aspect; individuals must be appropriately qualified to fill the crucial roles, particularly that of project director. Categories for specifying support needed could include additional personnel (Hull et al., 1973) and training (Turnbull et al., 1974; Hull & Kester, 1974).

Original program sites would also have needs related to staff. Personnel from OPD in New Jersey indicated that their system involved producer sites having a person from each job category available to consult with his opposite number in the new program. Other staff needs might include people to answer calls and letters, to handle mailing, and to arrange for visits.

Space required is a relatively straightforward factor. However, like cost, it can be affected by the manipulation of other items, e.g., scheduling changes which allow more students to use a given amount of space. Categories for specifying support needed could include: classroom space, storage space or materials production space, and office space. A producer site's needs might involve all of these, plus extra space to accommodate visitors.

Time requirements may involve a new site in rescheduling and may affect other factors such as costs and personnel. Also, it is important to consider the lead time required for successful installation of a new program (Hull & Kester, 1974). Time may be needed to acquire materials and equipment, to hire or train staff, and to plan for introduction of the new program. Apparently, in the PIP field test, problems arose because of insufficient lead time. The granting schedule must provide funds early. Categories for specifying time requirements could include: instructional time, time for on-going teacher preparation, and lead time.

Producer sites might also need lead time, again depending on the extent of their involvement in the diffusion of the program. Rescheduling might be required to permit visits, and to allow for staff absence on other activities such as training.

Magnitude of the innovation is defined by Hull et al. (1973) as the amount of change required in the user system, primarily as the system itself perceives it. One category included here is the need for new organizational components (Hull et al., 1973), a need which might affect producer sites as well as new users. Other categories might be: redeployment of staff, incorporating community participation, or elimination of a presently existing component of the user system. An additional consideration under this factor arises when the user site is bound by a formal commitment to implementing the new program. In such cases, the site needs to know exactly what constitutes compliance or noncompliance with its formal agreement. Experiences in the PIP field test illustrate this need; for example, sites frequently wanted to substitute reading materials, but feared this would amount to noncompliance.

Value orientation refers to the affective change required in connection with implementing a new program, e.g., desegretation (Hull et al., 1973). Categories for specifying the kinds of value orientations which may be affected by a new program are perhaps the most difficult of all to formulate;

however, as indicated in the literature (SSEC, [Sec. 6.0], 1973) and by the director of Project ALOHA with reference to the philosophy of individualized learning, they may be among the most important to the eventual success of the program. Some of these might be: philosophy of instructional methods, goals of an instructional program, nature of relationships within the system (student-student, student-teacher, teacher-teacher, teacher-administrator).

Methods of Assessing Needs

Some methods may be more appropriate than others for assessing a particular factor. One method involves the use of needs assessment questionnaires, either prior to or during the implementation of the program, or both. Although several change agent organizations report using this technique (Cutter, 1974) at least one author has criticized it on the grounds that the questions are inevitably structured and the responses interpreted in the light of the developer's own biases (SSEC [Sec. 6.0], 1973). One alternative to this is simply to request a needs assessment from the potential user; another is an analysis and selection kit like the one RMC designed to help users select among the PIPs. The system used by one state is to require the local district to submit a comprehensive long-range plan each year (Cutter, 1974). This plan outlines the needs which must be met in order to carry out the planned program. It might also be noted here, however, that such plans should probably not be based on a request for proposals which specifies what is available. OPD found that the proposals received from sites tended to quote the maximum amount available as being exactly the amount they needed (Soper, interview).

Other methods of finding out what sites need involve a process of negotiation, a two-way, person-to-person contact between producer and change agent and user. According to Hull et al. (1973), this is increasingly the method by which the major change takes place in educational systems. They view the negotiation process as providing opportunities for those favoring and opposing the innovation to adapt it to their needs while making changes in the adopting unit.

Various mechanisms have been used for finding out what sites need via a process of negotiation. One example is negotiation through a field

consultant who maintains a change agent relationship with the user system throughout the process of implementing a new program (Clark, 1974). Another method is negotiation through a group, a temporary collaboration of change agents and users to help implement change (SSEC [Sec. 6.0], 1973).

The different methods of gathering information about what sites need are not mutually exclusive, although the process of negotiation is more clearly oriented toward an on-going assessment during implementation and toward making provisions for possible modifications in the program as well as in the user system. As in getting information to the user, two-way communication is apparently viewed as more effective. The questionnaire approach would seem to be most useful when there is a need to obtain comparable data from more than one site, possibly during the early stages of determining site needs in general areas such as costs and budgeting.

The extent to which site needs can be identified during the early stages, before implementation has actually begun, is another point in question. The literature generally emphasizes the change agent role as one which continues throughout the process of planned change, implying that the identification of needs of the user system does not end until the final self-sustaining phase is reached. Indeed, the lesson from many of the Far west Lab case studies seems to be that during implementation many needs can arise which neither the sites nor the developers could foresee. If there is insufficient flexibility to recognize and respond to these needs, innovations can fail, as in the case of one instructional product which had to be withdrawn from the market (Turnbull et al., 1974). On the other hand, it is evident that the things that need to be found out before implementation begins are those that govern the program's existence and continuation, e.g., budgeting and funds. These are also the things that school systems routinely plan in advance. Thus, the use of a comprehensive plan to be submitted by the district, a method described above, would be one way of obtaining information and at the same time a detailed picture of the system's commitment to the change. An effective diffusion strategy should probably use a combination of advance and on-going methods of finding out what sites need.

IMPLICATIONS FOR RIGHT TO READ

1. Diffusion planning needs to take account of at least the following need factors: cost, staff, space required, time required, magnitude of the innovation, and value orientation. At least the first four affect both original program sites and new users.
2. The identification of site needs should begin prior to program implementation and should continue through an on-going process of "negotiation" among users, change agents, and producer sites.
3. As in getting information to users, the most effective methods of finding needs involve two-way, person-to-person contact.
4. Questionnaires, needs assessments, and long-range plans may also be useful, especially in early stages.

Chapter V

SUPPLYING WHAT USERS NEED

The packages developed by AIR for Right to Read are designed to promote the replication of successful reading programs. However, these dissemination products are not spontaneously replicable. A clear message for Right to Read from field interviews in California and New Jersey is that merely producing packages and making them available will not cause anything new to happen. Nor will these products alone guarantee that new sites will select, adapt, and implement the exemplary programs with the same measure of success achieved by the original site.

In this section, we view the packages as one component of a delivery system which may include additional components such as a change agent network, technical assistance, or training. This chapter discusses some systems for supplying the kind and amount of help users need, when they need it, to implement new programs successfully.

For Right to Read to play an active role in fostering replications of the packaged programs, answers to the following questions must be developed:

> What factors should be considered in supplying sites with what they need for successful implemenations?
>
> For how long a period should such support be supplied?
>
> What networks should be used and/or developed to supply this support?
>
> What role should the original site play in supplying new sites with the materials and supporting services they need for successful implementations?

Some existing delivery systems which have dealt with these issues are described in the next section.

Some Existing Delivery Systems

The examples given below include a federally funded, state-wide delivery system, a limited delivery system built into one of the Right to Read packaged programs, and two networks developed by research and development companies to promote widespread implementations of their curricula. These examples illustrate factors to be considered in supplying sites with what they need for successful implementation.

New Jersey's Title III dissemination network. In New Jersey, the Office of Program Development (OPD) provides Title III funds for disseminating

educational programs that have been approved by OE's Dissemination Review Panel (DRP). OPD works with staff of the sites where the exemplary programs operate (called "producer sites"). Through the close working relationship established between OPD and producer sites, successful program replications are promoted and fostered at new sites.

Title III funds are allocated to the producer sites to enable them to offer dissemination services and implementation support to consumers, i.e., users at other sites. Staff at each producer site provide materials and training for consumer site staff and consult with them during program implementation. The original linkage provided by OPD is thus complemented by a direct working relationship between producer and consumer sites. According to Soper (1974), even though there are major differences among school districts, their basic similarities mean that their staffs usually can establish a working relationship with one another because they understand each other's mode of operation. The problem-solving capabilities which develop through their association can transfer to situations which arise in succeeding years when the consumer site is on its own. In this way, the original producer-consumer relationship eventually contributes to stabilizing program implemenation.

This network has several attributes which are cited as important by other implementers and in the diffusion literature. For example:

- It is based on a client-centered approach in which the producer site helps the consumer site plan and implement the program.
- The producer site staff, as change agents, can more readily initiate good working relationships with consumer site staff because they are alike (both school districts) and understand each other's modus operandi.
- Funds from Title III permit the producer site to provide training, materials, and follow-up consultations to consumer sites. This level of effort would not be possible without the Title III allocations.
- A problem-solving approach to troubles that arise at new sites builds in a capability for these consumers to gradually stabilize the new program, to develop their own solutions to problems, and eventually to reach a point where they can carry on without assistance from the producer.

Hawaii English Program (HEP). HEP uses its own network to spread the program beyond the original island site. This network might not be able to respond to an unlimited number of new implementations, but so far it has been effective in managing out-of-state installations in California, Washington, American Samoa, Guam, and the American Trust Territory.

There are three main components in the HEP delivery system:

- the Hawaii Curriculum Center (HCC) in Honolulu
- HEP demonstration sites in the islands and on the mainland
- HEP installation teachers

The format by which these three components coordinate HEP installations is tailored to the characteristics of each new site but typically, their respective roles can be characterized as follows:

Hawaii Curriculum Center--HCC makes arrangements for supplying curriculum materials to new HEP sites. This involves negotiating a production contract with Materials for Today's Learning (MTL) who manufactures the curriculum items. HCC also participates in training new sites by sending HEP representatives to the mainland or other locations to conduct practicums or to supervise some of the training sessions. For HEP sites who have been operating long enough to be ready to experiment with program modifications, program specialists at HCC review the suggested changes and cooperate in helping teachers design validations to carry out in their own classrooms (planned variation). HCC's program specialists also participate in reviewing the results of these tryouts and deciding whether or not the modification should be incorproated in the HEP system. In summary, HCC maintains the integrity of the HEP curriculum by participating in training new sites and in monitoring their attempts to modify HEP procedures.

HEP demonstration sites--Successful implementations of HEP can become demonstration sites. The oldest mainland demonstration site for HEP is Project ALOHA in San Jose, California. Bill Adams, the site director, was interviewed to find out how ALOHA helps HEP spread to new sites. One role of the demonstration site is to accommodate visitors. Adams has found that giving potential adopters a chance to see the program in action is an essential step in gaining their commitment to implement it. A second role of the demonstration site is to provide training. ALOHA now trains staff for mainland installations, although HCC personnel still participate in some training sessions.

HEP installation teachers--New sites identify a person to receive 6 weeks of special training for this role. The exact functions, deployment, and relationship of installation teachers to other district curriculum personnel may vary among districts; but whether they are traveling personnel or school-based lead teachers, HEP experience indicates that installation teachers are indispensable in getting the program established. Their role includes giving direct help to classroom teachers, assisting with in-service training, introducing new components as they are delivered, disseminating information about the program, monitoring evaluations of the program, responding to calls for help, and providing feedback to administration.

Commenting generally on the HEP dissemination format, Adams emphasized that contact between a new site and an established program site is critical for successful program replication. This contact is maintained indefinitely, though not on such an intensive basis as the first year, in order to keep programs from dying out.

Research for Better Schools (RBS) field consultants. Clark (1974) described the role and impact of this training approach to implementing change in schools. RBS uses a network of over 50 school districts to field test their products, to serve as demonstration sites for product implementation and training sites for new adopters of RBS products, to provide feedback to product developers, and to serve as a resource base for research on implementation and planned change. The key change agent in this network is the RBS field consultant.

RBS field consultants are trained to establish and maintain working relationships with clients, to train teachers and administrators, to diagnose and prescribe for difficulties of implementation (problem solving), and to study change-related phenomena. Thus, the RBS field consultants maintain a linkage role between research and development (RBS) and product users.

The impact of the RBS field consultants was measured by feedback from clients and by studies conducted on problems related to implementation of innovations. Some points from the evaluation are relevant for Right to Read's diffusion planning:

- The consultants were able to establish good working relationships with the school and district personnel, but were less often able to serve in the planned problem-solving role.

- Lack of success in this aspect of consulting was due either to the nature of the problem (e.g., lack of funds to carry out an innovation) or resistance to the innovation by community, staff, or central office.
- The consultants could not easily appear to be objective helpers in some problem-solving situations because they were often identified as "salesmen" of RBS products.
- As a result of the evaluation, RBS now wants to shift the change agent role away from so much emphasis on a single school building and toward systematic planning for change with central school district officers, intermediate and county units, and State departments of education.

In summary, RBS has learned that perhaps the most effective change agent role for their field consultants will be that of securing better administrative support for product implementation.

Project PLAN's delivery system. The American Institutes for Research and Westinghouse Learning Corporation have developed a system for promoting and providing support for replications of Project PLAN. PLAN is a large-scale demonstration and implementation of individualized curricula in the areas of reading and languages, mathematics, science, and social studies for pre-kindergarten through twelfth grade. Several features of PLAN make special training and implementation support essential for new sites. Among them are special materials and evaluation instruments, special instructional and classroom management procedures, and a computer support system for scoring, record keeping, and daily planning.

An interview with Dr. William Shanner of AIR raised the following points about the PLAN delivery system, which has resulted in implementations in nearly 104 schools in the United States:

Using local administrators to guide implementation--Since every school situation is different, PLAN consultants work individually with each administrator to tailor the installation to local needs. PLAN workshops prepare school administrators to take the major responsibility for training instructional staff and for identifying and solving implementation problems. Special classroom observation forms are suggested for the administrator to use in monitoring PLAN. Thus, the PLAN delivery system utilizes both its own representatives and on-site administrators to supply what is needed for successful replications.

Separating technical assistance and marketing activities--PLAN marketing staff and PLAN field service staff are different individuals with

different roles. Marketing staff contact PLAN sites to order and supply program materials they need. In contrast, field service staff supply technical assistance and training support sites need to successfully install PLAN. This arrangement removes any "salesman" image which might interfere with instructional consulting.

Stabilizing new installations--Shanner recommended an alternative to using technical assistants for implementation support. Identify schools that are at least 2 or 3 years old and have successfully implemented the exemplary program for at least 1 year. Make these the demonstration schools and pair them with new sites. A strong big brother relationship is likely to develop because they are both relatively new at implementing the program, and the big brother site--having successfully installed the program itself--is a highly credible source of technical assistance. Shanner also believes that it is easier to wean new sites from this kind of relationship than it is to withdraw a field consultant after 2 years or so. Shanner's suggestion is consistent with conclusions from OPD experience with linking producer and consumer sites in New Jersey (Soper, 1974) and with the conclusions of Rogers and Shoemaker (1971) regarding the change agent's role in stabilizing change.

Right to Read's Packaged Programs: Supplying Materials, Training, and Implementation Support to New Sites

The examples in the preceding section offer some suggestions for Right to Read based on the experience of existing delivery systems. More insights, gained from the literature and from field interviews, are summarized below.

Allow sufficient lead time--RMC staff caution that the lead time required for producing materials and supplying them to new sites must not be underestimated; they suggest that if implementation is desired in September, packages and other necessary materials should be delivered to sites as early as March, for some programs. RMC staff also found that timing of contract awards is a constraint that should be identified before a field test schedule is developed. Recruitment problems can also introduce delays, particularly in training schedules. The implication for Right to Read is that the schedule for supplying materials, training, and implementation support will have to be tailored to each site, because constraints like those mentioned by RMC can vary. Shanner, in discussing Project PLAN implementation, indicated that by starting midyear, many problems inherent in Fall installations can be avoided--teachers are already hired, student turnover has stabilized, children are accustomed to

the routine of school, etc. However, he qualified this point; midyear installations are obviously not feasible for beginning reading programs. The implication for Right to Read is that midyear installations can be considered for packaged programs that do not serve beginning readers.

Tailor dissemination format to each producer site--Right to Read's packaged programs vary in the range of implementation services and materials they can supply to new sites. In New Jersey, OPD staff work out feasible and effective dissemination formats with each producer site. Included in the discussions are administrative staff from the site and central office staff from the district. The most important factors examined in depth in these face-to-face negotiating sessions include the following: (Soper, 1974).

- Will the administrative staff and the Board of Education certify that local funds will be made available to support the program's essential components?
- Is staff at the producer site willing to accommodate visitors on a regular basis?
- Are staff assigned to help consumers become thoroughly familiar with the program? Will they be available on a flexible basis to perform these duties?
- Will the staff at the producer site determine what additional materials consumers will need for the program's replication, and make available staff to prepare these?

Once a mutually agreeable dissemination format is developed, it is written up in the form of a Producer-Consumer Agreement, described in an earlier chapter. By signing it, the producer site agrees to supply specific kinds of implementation support to consumer sites in exchange for receiving Title III funds to finance this work.

Train for program replication and planned variation--The outstanding reading programs packaged for Right to Read are soundly developed and tested approaches. Moreover, they have been validated by AIR and approved by DRP so that potential users can be assured of their value. This assurance implies that the program is a coherent approach and that all of its important features should be implemented by new sites who want to achieve similar success.

If replications beyond the original program site are desired, supplying program materials is not enough. New sites will have to be trained to copy the program. If modifications are desired to adapt the program to unique characteristics of a new site, staff will have to be trained to base such

changes on systematic, sound evaluations. Bill Adams of Project ALOHA summarized HEP's training strategy, which reflects two broad purposes: replication first, modification later. That is, new teachers are trained to faithfully copy program procedures the first year, even if they do not understand them fully. Then, as the teachers gain experience and their understanding grows, training in subsequent years focuses more on how they can test their ideas for improving HEP. Underlying this approach is the assumption that teachers must understand the program and be able to do it as prescribed before they can really see how it might be improved.

Both literature sources and field interviews indicated that training for program replication should emphasize different sets of skills for different audiences, although at some points these overlap. For example, both administrators and teachers must be taught to understand the rationale, philosophy, or theories underlying the program, and how it evolved to its exemplary form, or otherwise they may not view it as a coherent approach and thus may fail to implement all of its important features (New Jersey OPD and producer site staff interview; Adams, interview; RMC staff, interview; Foshay, in Rogers et al., 1973; SSEC [Sec. 6.0], 1973). In addition, administrators may need special training in leadership and observation skills to equip them to provide personal support and encouragement to staff and to make sure that the program is being implemented properly (OPD staff, interview; Shanner, interview; Clark, 1974; SSEC [Sec. 4.0], 1973). Teachers, on the other hand, require thorough training in instructional procedures so that they can implement the program as planned. For complex programs, it is advisable to provide levels of training that gradually advance the teacher to more sophisticated applications of program theory (Adams, interview re HEP training). The format for their training can vary from workshops to 1-on-1 arrangements, but one conclusion is clear--they will need some practicum or internship experience as part of their preparation for the new program (SSEC, [Sec. 5.0], 1973; Adelman, 1973; Adams, interview).

Who provides the training is important. As a change agent, the trainer's success will be related to factors such as client orientation, amount of effort made, and "likeness" to trainees (Rogers and Shoemaker, 1971). Soper (1974) indicated that OPD's use of producer sites for training consumers involves matching trainers and trainees. That is, principals are matched with principals, teachers with teachers, support staff with support staff. In this way, OPD feels that new staff are more likely to acquire all of the

skills and knowledge required to replicate the program successfully.

Provide follow-up training and technical assistance--Questions and problems never arise according to a convenient schedule. When a new site implements a program, good planning and training will contribute to its success, but there will also have to be some provision made for supplying help when it is needed. Other implementers have supplied this kind of assistance in a variety of ways. One way is to have a specially trained consultant on call (RBS, PLAN), or on site (HEP installation teachers). Another is for the producer site staff to provide follow-up consultations to consumers to reinforce the skills taught during inservice sessions and to guide their application at the new site (OPD producer site staff).

Right to Read may wish to exercise other options for supplying new sites with the training and follow-up assistance needed for implementation of the packaged programs. The Far West Lab's diffusion casebook (Turnbull et al., 1974) documents a wide variety of formats for supplying these services to new sites, but no conclusions are drawn about their relative effectiveness.

IMPLICATIONS FOR RIGHT TO READ

1. Diffusion planning should recognize that new sites need to observe the program in action before they commit themselves to adopt it. The disseminator should be sure that the staff of each packaged program can accommodate visitors on a regular basis for orientation, discussion, and classroom observation. Varying amounts of assistance may be required for sites to do this.

2. Diffusion planning should assume that new sites will need more materials, training, and follow-up assistance than are provided in the packaged materials.

3. The disseminator should explore with staff of the packaged programs feasible plans for supplying program materials in quantities sufficient for the new sites (e.g., local reproduction at cost, commercial production of program-developed materials, etc.).

4. The disseminator should also explore with staff of the packaged programs alternatives for supplying new sites with training and follow-up consultation. District-level staff should also be included in these meetings. Adequate funding must be made available so that program and district staff can fulfill the roles agreed upon.

5. Formalizing arrangements in a legal document similar to a Producer-Consumer Agreement will minimize confusion or misunderstanding which could reduce the effectiveness of the diffusion plan.

6. Materials, training, and consulting should be supplied to new sites several months before program installation. Training and consulting should continue as needed to ensure faithful replication initially, and planned variation thereafter.

7. The delivery system(s) Right to Read selects or adapts to provide materials, training, and implementation support should have attributes which enhance change-agent success. (Examples in this chapter illustrated attributes such as client orientation, compatibility with users ["likeness"], ability to contribute a substantial effort [money or time] to diffusion and implementation, and previous experience in assisting the successful implementation of innovative educational programs.)

8. The delivery system should establish a linkage between staff at new sites and their counterparts at the original sites. The purpose of linking them will be to foster a long-term working relationship which provides problem-solving assistance during program planning, training, installation, and adaptation.

9. The strategy developed to supply new sites with what they need should also contribute to stabilizing the new installation. Thus, there must be some provision for weaning new sites gradually, until they reach a point where they can solve problems on their own and can carry on without assistance.

10. The delivery system should not confine change-agent roles to dealing with staff for the new program. Change agents must also influence administrators.

11. Administrators at the new sites should be specially trained for their program management role. Administrators at higher levels need to be briefed on the kinds and amounts of support they should supply for the

new program.

12. Other specific implications for supplying training include these:

    a. Different categories of personnel should be supplied with training tailored to their roles; those who train each targeted audience should match the audience in level and type of responsibility.

    b. Some portion of the training for each audience should promote understanding and acceptance of the validated program as a coherent approach. Piecemeal adaptation should be discouraged.

    c. Face-to-face follow-up consultations should be provided to reinforce the skills imparted to each audience during training, and to be sure they are being correctly used.

    d. When essential program features are not being implemented correctly, the reasons for such departures should be determined and remedied through future training sessions, if appropriate.

    e. Training, like other forms of implementation support, should stress faithful replication at the outset. Training in subsequent years should equip the experienced program teacher to use systematic procedures to validate her ideas for improving the program.

Chapter VI

EVALUATING THE EFFECTIVENESS OF THE DIFFUSION EFFORT

Examples from the Field

Methods for evaluating the effectiveness of diffusion efforts will depend on the specific goals of these efforts. The Far West Casebook (Turnbull et al., 1974) described several programs developed by commercial publishers in which the goal was persuading schools to buy the product, and the evaluation of success was simply based upon sales figures. The information in the same source, however, suggests that successful use, not just purchase of a product or program does have an effect on even a simple index like sales. As developers have realized this, they have begun to put more emphasis on training users for successful implementation of their programs, but in some cases the realization has come too late, as in the case of SRA's Inquiry Development Program in Physical Science (Turnbull et al., 1974). Some of the developers who have taken measures to ensure successful use of programs have also made special efforts to evaluate this extension of their dissemination efforts. Such cases are much rarer in the literature, but one example of a developer's evaluation plan is found in the study of the Research for Better Schools field consultants (Clark, 1974). These are change agents who aid schools in obtaining and using RBS programs, and RBS has three means of evaluating their effectiveness: joint travel to field sites by a supervisor and the field consultants, evaluative data collected by survey of client users, and analysis of data collected by the field consultant, who also has the special role of carrying out research on the diffusion and implementation of planned change.

SRA and RBS thus illustrate both ends of the range of possible evaluation approaches. At one end, the question being asked is "Did the user get the program?" At the other end, "Did the total dissemination strategy enable him to use the program successfully?" The first-year evaluation of the PIP's, described in an earlier section, falls between these two approaches. There the research question is "Did a single information product enable the user to implement the program successfully?" and secondarily, "If not, what else is needed?"

Evaluating a Right to Read Diffusion Effort

In diffusion of the Right to Read packaged programs, evaluation could focus at any one of these points along the range. If package diffusion aims strictly at getting information to the potential users, evaluation

might consist of recording the number of packages disseminated. If impact of the packages is to be gauged by the number of potential users who actually try one of the packaged programs, it might be measured by a follow-up survey of all package recipients. However, we have recommended that the packages be used as one component in a systematic diffusion plan that aims at successful use of the programs by others. Accordingly, we would recommend that evaluation of the plan's effectiveness be measured by the incidence of successful replications.

How would such measurement be carried out? Logically, it would have two parts: measurement of adherence to the program features described in the packages, and measurement of cognitive gains in reading similar to those produced by the original program.

Measuring replication of program procedures. In an earlier section, we have discussed the issue of free adaptation versus replication, and the possibility of "maladoption." Although ultimately it may be true that anything that works is not a maladoption, the evidence indicates that success in adopting exemplary programs is more likely when the initial effort is one of faithful replication. As Hawaii English Program findings have shown, those who are thoroughly experienced in using the program as it was intended are also the best equipped to undertake successful planned variations.

In investigating this point, HEP developed and used several instruments to measure the degree of program adherence in Hawaii schools. Some of these instruments are described in their evaluation reports, and include records kept by the installation teachers of time spent on HEP instruction in each classroom, and an 11-item questionnaire on systems adherence also completed by the installation teachers for the classrooms they supervised. This questionnaire contained nine questions about specific areas of program adherence, such as "Number of classes using phonics as a supplement to HEP," or "Number of classes not heterogeneously grouped." In addition, there were two open-ended questions which allowed the installation teachers to note any other types of program deviations.

One check on the usefulness of this type of program adherence evaluation was the analysis done by Hawaii evaluators of pupil performance in relation to program adherence. They found that pupils in classes which adhered closely to HEP procedures had a higher rate of completion of the HEP Language Skills objectives.

In diffusion of Right to Read packaged programs, an evaluation plan that included measurement of adherence to program features could throw additional light on the important questions of whether, when, and how modifications should be encouraged in the adoption of validated programs.

Measuring student outcomes. Ultimately of course, the goal of spreading information about exemplary programs is to bring about improvement in reading through the use of their proved methods. Evaluation of reading achievement of students at the new sites could be carried out by an independent evaluator, or provisions could be made for the final evaluation carried out by the new program site to be supervised and reviewed by the change agency. Theoretically, a successful new site should produce achievement gains similar to those produced by the original program. However, as in the case of the original programs, significant gains should not necessarily be expected at the end of the first year. Nonetheless, it might be possible to form a projection of results based on the experience of the original program during its earlier implementation phase. An evaluation plan should recognize and provide for this long-term effort, in which scrutiny would focus initially on the success of program replication and the collection of achievement data, and subsequently on the demonstration of improved results in reading.

Measuring cost effectiveness. One other aspect of the evaluation of any change effort is its efficiency. As Rogers and Shoemaker (1971) point out, the success of diffusion is directly related to the amount of change agent effort, but the cost of such efforts is important. Even if the supplying of technical assistance is carried out by producer sites as in New Jersey, additional funds must be furnished to them for this purpose (Soper interview). In the Right to Read diffusion effort, the costs associated with dissemination and implementation should be identified and related to outcomes--degree of faithful replication and impact on student achievement.

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